# Mascarenas selected to attend National Academy of Engineering symposium

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David Mascarenas of the National Security Education Center (NSEC) has been chosen by the National Academy of Engineering to attend their 2014 U.S. Frontiers of Engineering Symposium. About 100 outstanding engineers under the age of 45 will meet for an intensive two and a half day symposium to discuss cutting-edge developments in four areas: Next Generation Robotics, Frontiers in Materials for Batteries, Impacts of Shale Gas and Oil on the Economy, Environment and Energy Sustainability, and Technologies for the Heart. The goal of the Frontiers of Engineering program is to bring together engineers from all engineering disciplines and from industry, universities, and federal labs to facilitate cross-disciplinary exchange and promote the transfer of new techniques and approaches across fields to sustain and build U.S. innovative capacity. The symposium will be held at the National Academies' Beckman Center in Irvine, Calif. in September 2014.

Mascarenas' achievements

Mascarenas earned a doctorate in structural engineering from the University of California, San Diego, where he had a NASA Space Grant Graduate Fellowship and a National GEMS Consortium Fellowship. He worked as a laboratory manager at SAIC/ Sullivan International to develop systems health monitoring software for ground-based robots, and then joined LANL as a Director's funded postdoctoral researcher in 2010. He became a technical staff member in the NSEC's Engineering Institute in 2012.

Mascarenas investigates the application of compressive sensing techniques to structural health monitoring, the deployment of wireless sensor networks, standoff experimental mechanics, and the development of techniques to interface humans to data using vibro-tactile interfaces. He received a 2014 Laboratory Directed Research and Development (LDRD) Early Career Researcher Award for his work on techniques for remotely deploying sensor nodes. Mascarenas co-directs the Los Alamos National Laboratory Dynamic Summer School, and he organized the Engineering Institute's new educational Advanced Studies Institute, a novel educational program that features a professional development lecture series.

About the National Academy of Engineering

Founded in 1964, the National Academy of Engineering (NAE) is a private, independent, nonprofit institution that provides engineering leadership in service to the nation. Its mission is to advance the well being of the U.S. by promoting a vibrant engineering profession and by marshaling the expertise and insights of eminent engineers to provide independent advice to the federal government on matters involving engineering and technology. The NAE designed the Frontiers of Engineering program to bring together a select group of emerging engineering leaders from industry, academe, and government labs to discuss pioneering technical work and leading edge research in various engineering fields and industry sectors. Attendance at the meeting is by invitation-only following a competitive selection process. The attendees must have demonstrated accomplishment in engineering research and technical work with recognizable contributions to advancing the frontiers of engineering; be interested in engineering developments in other fields and able to consider how advances, techniques, and approaches in those areas relate to the nominee's own field; and possess the potential to be a future leader in the U.S. engineering endeavor. The goal of the meetings is to introduce these outstanding engineers (ages 30-45) to each other, and through this interaction facilitate collaboration in engineering, the transfer of new techniques and approaches across fields, and establishment of contacts among the next generation of engineering leaders. An alumni program supports continuing contact among the participants. More information on the symposium is available online.